

PATENT COOPERATION TREATY

From the:
INTERNATIONAL SEARCHING AUTHORITY

To:

Freehills Patent & Trade Mark Attorneys
MLC Centre
Martin Place
SYDNEY NSW 2000

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing (day/month/year) 3 DEC 2004		
Applicant's or agent's file reference S80768026:TPG	FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/AU2004/001521	International filing date (day/month/year) 3 November 2004	Priority date (day/month/year) 3 November 2003
International Patent Classification (IPC) or both national classification and IPC Int. Cl. ⁷ A23L 3/015, 3/3436		
Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION et al		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later..

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer GILLIAN ALLEN Telephone No. (02) 6283 2266
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/AU2004/001521

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/AU2004/001521

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-18	YES
	Claims	NO
Inventive step (IS)	Claims 1-18	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-18	YES
	Claims	NO

Citations and explanations:

Citations

- D1 Tewari et al. Fresher Under Pressure Scientific Research High Pressure Processing of Foods: An Overview (FIRST PUBLISHED IN SCIENCE DES ALIMENTS, 19 (1999) P 619-661).
http://www.fresherunderpressure.com/science_hpp_review.htm
- D2 JP03183435. DAINIPPON PRINTING CO LTD. 9 August 1991.
Chemical Abstracts AN 115:206608 CA
- D3 Raso J, Barbosa-Canovas GV. Nonthermal preservation of foods using combined processing techniques. Crit Rev Food Sci Nutr. 2003;43(3):265-85
- D4 Ross AI, Griffiths MW, Mittal GS, Deeth HC. Combining nonthermal technologies to control foodborne microorganisms. Int J Food Microbiol. 2003 Dec 31;89(2-3):125-38.

Novelty

None of the prior art discloses methods of inactivating microbial spores by a combination of ultra high pressure processing and oxygen absorption. Therefore all claims are novel.

Inventive Step

The problem of the invention is to inactivate microbial spores in stored food. The applicants' solution to the problem is to treat food combination of ultra high pressure processing and oxygen absorption by oxygen scavenging materials.

D1 and D2 both disclose methods of treating food with a combination of high pressure and oxygen scavengers to kill vegetative microbes. However, neither teaches the use of these processes to inactivate microbial spores. It is therefore considered that the person skilled in the art faced with the problem of the invention would not be led by the prior art to consider inactivating microbial spores by the processes of the present claims. Therefore all claims are considered inventive.